

# CINDY L. SIGLER

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Graduate Research Assistant • Environmental Horticulture Department • University of Florida

## CONTACT INFORMATION

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## EDUCATIONAL BACKGROUND

<b>Doctor of Philosophy, Plant Breeding and Genetics</b> University of Florida	Aug. 2016- present
<b>Bachelor of Science, Plant Science</b> University of Florida Minor: Entomology and Nematology Cum Laude	Jan. 2014- July 2016
<b>Associate Degree, Liberal Arts</b> Polk State College Honors Program Cum Laude	Aug. 2010- Dec. 2013
<b>Chain of Lakes Collegiate High School</b> Graduated with Honors	Aug. 2010- May 2012

## PERSONAL STATEMENT

Cindy Sigler is a graduate research assistant in the Environmental Horticulture Department at the University of Florida. Her current research involves a focus on floral volatile characterization with special emphasis on insect/microbe-plant interactions. Her model flower system includes petunia and caladium. Miss Sigler is using molecular biology and biochemistry to understand important volatile compound synthesis and function in regard to insect/microbe interaction. She ultimately wants a career in plant breeding and biotechnology.

## EMPLOYMENT EXPERIENCE

<b>UF Plant Biotechnology and Genetics Laboratory</b> <i>Environmental Horticulture Department</i>	Nov. 2014- Present
<b>Role:</b> Graduate Research Assistant under supervisory of Assistant Professor Thomas A. Colquhoun <b>- Projects:</b> <ul style="list-style-type: none"><li>Investigating floral metabolism of <i>Petunia × hybrida</i> cv ‘Mitchel Diploid’ (MD) and <i>Caladium bicolor</i> in pollinator syndrome ecology</li></ul>	

- PAL/C4H protein family characterization funded by the American Floral Endowment
- LED manipulation of petunia, tomato, and blueberry germination
- Genotyping and phenotyping of transgenic petunias
- Identifying bitter suppression volatiles in grapefruit
- Seed germination and plant care in tissue culture
- Volatile collection for petunia, grapefruit, strawberry and blueberry

**UF Teaching Assistant for “Plants, Gardens, and You” course**

Aug.2015- Dec. 2015

**Role:** Record keeping, marking attendance, and quiz grading

**UF/IFAS Citrus Research & Education Center Plant Genetics Laboratory** Jan. 2012- Aug. 2014  
*Horticulture Sciences Department*

**Role:** Undergraduate Research Assistant in Professor Jude Grosser lab’s under Research Assistant Scientist Dr. Manjul Dutt

- Tissue culture and transformation techniques on citrus cultivars
- Grafting of desired scions to disease/pest resistant rootstocks
- Work with cloning and gene expression
- Embryonic callus formation initiation
- Transformation experience with tomato and tobacco
- Greenhouse upkeep of transgenic citrus plants

## BASIC RESEARCH EXPERIENCE

RT-PCR techniques  
 Bacterial expression of recombinant protein  
 Volatile compound collection  
 GC-MS  
 LED light treatment  
 RNA isolation  
 Bacterial and plant DNA isolation  
 Restriction enzyme analysis  
 SDS-PAGE electrophoresis  
 Transformation of competent cells  
 Agrobacterium-mediated plant transformation  
 Cleft grafting  
 Tissue culture  
 General plant care

## SOFTWARE PROFICIES

Vector NTI Advanced ‘11  
 NCBI, PubMed Central, ExpASy, EMBL, Clustal, Phylogeny.fr, TAIR, Primer3, NEBcutter, Multialign, WebLogos, TMHMM, TargetP, PDB, CDD, PFAM, UniProt, KEGG, EcoCyc, MetaCyc, and STRING web tools for bioinformatics analysis  
 Microsoft Office, Excel, and PowerPoint 2010  
 Adobe Creative Suite CS5

Internet Explorer, Mozilla Firefox, Google Chrome  
Microsoft Windows XP / Vista / 7

## SERVICES

Hawthorne Middle High School Science Fair Judge	Dec. 2016
Westwood Middle School Science Fair Judge	Dec. 2016
Environmental Horticulture Graduate Student Association	Aug. 2016- present
Meals on Wheels Volunteer	Aug. 2016- present
Physics Bus Volunteer	Jan. 2015- Present
Tau Sigma Honor Society	Aug. 2014-2016
Entomology Club	Aug. 2014-2016

## AWARDS

Graduate Student Fellowship	Aug. 2016-2020
Dean's List	May 2016- Aug. 2016
University Scholars Program	Aug. 2015- Aug. 2016
Davis Scholarship	Aug. 2015
Knapp Scholarship	Aug. 2015
Florida Bright Futures Scholarship	Aug. 2012- May 2016

## RELEVANT COURSES TO PLANT BIOTECHNOLOGY

Biology 1, Biology 2, Chemistry 1 Chemistry 2, Organic Chemistry 1, Organic Chemistry 2, Principles of Entomology, Physiology and Ecology of Crops, Microbiology, Genetics, Plant Chromosomes and Genomes, Plant Breeding, Micropropagation of Horticultural Crops

## REFERENCES

Jude W. Grosser, Ph.D.  
UF/IFAS Citrus Research and Education Center  
Dept. of Horticultural Sciences  
700 Experiment Station Rd.  
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